ABSTRACT

Method and system for providing autonomous real time updates of a network topology. The method is based on a physical layer point-to-point protocol residing in each network element. Either responsive to a request from a network management system or responsive to network trigger event a network initiates a request to its neighboring network elements. The neighboring network elements respond to the request by identifying themselves via an electronic serial number and the port by which they are connected to the requesting network element. The requesting network element then forwards the response to the request to a network management system. The network management system then use the responses to construct a network topology.

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